

IN THE CLAIMS:

Please cancel claims 1-33 without prejudice or disclaimer and add new claims 34-55 as set forth below:

1.-33. (Canceled)

34. (New) An occlusion detection system for detecting an occlusion in a fluid path of an infusion pump with a reservoir containing fluid for delivering fluid to a user, the occlusion detection system comprising:

a housing;

a motor contained within the housing;

a drive train having a front end and a rear end, the front end of the drive train being operatively coupled to the reservoir, and the drive train including at least one drive train component that reacts to a stimulus from the motor to force the fluid from the reservoir into the user;

a sensor positioned on the at least one drive train component at or near the front end of the drive train to measure tension or compression proportional to a pressure applied to the at least one drive train component, and wherein the sensor produces three or more output levels across a range of measurements; and

an electronics system that processes the three or more output levels to declare when an occlusion exists.

35. (New) An occlusion detection system according to claim 34, wherein the at least one drive train component is a bellows.

36. (New) An occlusion detection system according to claim 35, wherein the bellows includes a proximate wall, a distal wall, and a flexible sidewall.

37. (New) An occlusion detection system according to claim 36, wherein the sensor is mounted on the distal wall of the bellows.

38. (New) An occlusion detection system according to claim 36, wherein the flexible sidewall is constructed of a deformable resilient material.

39. (New) An occlusion detection system according to claim 35, wherein the bellows is filled with a fluid.

40. (New) An occlusion detection system according to claim 35, wherein the bellows includes a threaded member.

41. (New) An occlusion detection system according to claim 34, wherein the at least one drive train component is a cap.

42. (New) An occlusion detection system according to claim 41, wherein the cap is constructed of a resilient material.

43. (New) An occlusion detection system according to claim 34, wherein the sensor is a strain gauge.

44. (New) An occlusion detection system according to claim 34, further including a stopper slidably positioned in the reservoir to push the fluid out of the reservoir.

45. (New) An occlusion detection system according to claim 44, wherein the at least one drive train component presses directly against the stopper in response to a stimulus from the motor.

46. (New) An occlusion detection system for detecting an occlusion in a fluid path of an infusion pump, the occlusion detection system comprising:

a housing;

a reservoir containing fluid for delivering fluid to a user, wherein at least a portion of the reservoir is contained within the housing;

a stopper slidably positioned in the reservoir to push the fluid out of the reservoir;

a motor contained within the housing;

a drive train having a front end and a rear end, wherein the front end of the drive train is operatively coupled to the reservoir, the drive train including at least one drive train component that reacts to a stimulus from the motor to contact the stopper and force the fluid from the reservoir into the user;

a sensor positioned on the at least one drive train component at or near the front end of the drive train to measure tension or compression proportional to a pressure applied to the at least one drive train component, wherein the sensor is in direct contact with the stopper, and wherein the sensor produces three or more output levels across a range of measurements; and

an electronics system that processes the three or more output levels to declare when an occlusion exists.

47. (New) An occlusion detection system according to claim 46, wherein the at least one drive train component is a cap.

48. (New) An occlusion detection system according to claim 47, wherein the cap is constructed of a resilient material.

49. (New) An occlusion detection system according to claim 46, wherein the sensor is a strain gauge.